

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	JUL 20	Powerful new interactive analysis and visualization software, STN AnaVist, now available
NEWS	4	AUG 11	STN AnaVist workshops to be held in North America
NEWS	5	AUG 30	CA/CAPLUS - Increased access to 19th century research documents
NEWS	6	AUG 30	CASREACT - Enhanced with displayable reaction conditions
NEWS	7	SEP 09	ACD predicted properties enhanced in REGISTRY/ZREGISTRY
NEWS	8	OCT 03	MATHDI removed from STN
NEWS	9	OCT 04	CA/CAPLUS-Canadian Intellectual Property Office (CIPO) added to core patent offices
NEWS	10	OCT 06	STN AnaVist workshops to be held in North America
NEWS	11	OCT 13	New CAS Information Use Policies Effective October 17, 2005
NEWS	12	OCT 17	STN(R) AnaVist(TM), Version 1.01, allows the export/download of CAPLUS documents for use in third-party analysis and visualization tools

NEWS EXPRESS JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 11:18:49 ON 27 OCT 2005

=> filereg

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> 53980-88-4

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an

index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.42

0.42

FILE 'REGISTRY' ENTERED AT 11:19:55 ON 27 OCT 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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STRUCTURE FILE UPDATES: 26 OCT 2005 HIGHEST RN 866186-08-5
DICTIONARY FILE UPDATES: 26 OCT 2005 HIGHEST RN 866186-08-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

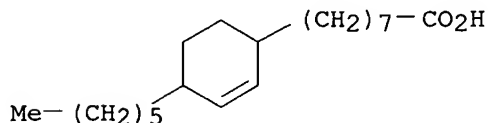
=> 53980-88-4

L1 1 53980-88-4
(53980-88-4/RN)

=> d l1

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
RN 53980-88-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Cyclohexene-1-octanoic acid, 5(or 6)-carboxy-4-hexyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN DA 1550
CN DiACID 1550
CN DiACID C21
CN Westvaco 1550
CN Westvaco DiACID 1550

CN Westvaco WV 1550
 MF C21 H36 O4
 CI IDS, COM
 LC STN Files: CA, CAPLUS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB,
 TOXCENTER, USPAT2, USPATFULL
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



D1-CO₂H

77 REFERENCES IN FILE CA (1907 TO DATE)
 25 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 77 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.27

2.69

FILE 'CAPLUS' ENTERED AT 11:20:10 ON 27 OCT 2005

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FILE COVERS 1907 - 27 Oct 2005 VOL 143 ISS 18

FILE LAST UPDATED: 26 Oct 2005 (20051026/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> 11/prep

77 L1

3376692 PREP/RL

L2

15 L1/PREP

(L1 (L) PREP/RL)

=> d 12 10-15 ti

L2 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of quaternary ammonium compounds for use as fabric softeners

L2 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Cationic emulsifiers and their use in making aqueous bituminous emulsions and pavement-sealing emulsion-aggregate slurries

L2 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Lubricants

L2 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dicarboxylic acids

L2 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dicarboxylic acid from linoleic acid

L2 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dicarboxylic acid from linoleic acid-containing fatty acid mixtures

=> d 12 13-15 ti fbib abs

L2 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dicarboxylic acids
 AN 1976:4485 CAPLUS
 DN 84:4485
 TI Dicarboxylic acids
 IN Ward, Benjamin F.
 PA Westvaco Corp., USA
 SO Can., 11 pp.
 CODEN: CAXXA4
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 971577	A1	19750722	CA 1972-154600	19721023
				CA 1972-154600	A 19721023

GI For diagram(s), see printed CA Issue.
 AB On heating a mixture of distilled tall oil fatty acids with $\text{CH}_2\text{:CHCO}_2\text{H}$ at 250° in the presence of iodine the linoleic acid portion of the fatty acids underwent addition reaction to give the dicarboxylic acid I ($x = 2, 3$) and linoleic free tall oil fatty acids. I was separated from the reaction mixture by fractional distillation and was further purified via distillation of its di-Me ester.

L2 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dicarboxylic acid from linoleic acid
 AN 1975:458269 CAPLUS
 DN 83:58269
 TI Dicarboxylic acid from linoleic acid
 IN Ward, Benjamin Franklin
 PA Westvaco Corp., USA
 SO Brit., 6 pp.
 CODEN: BRXXAA
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1373316	A	19741106	GB 1972-48767	19721023

GI For diagram(s), see printed CA Issue.
 AB The title decarboxylic acid I (R = 2- or 3-CO₂H) was prepared from the linoleic acid portion of distilled tall oil fatty acids by treating the mixture with CH₂:CHCO₂H in the presence of iodine; I was separated from the fatty acids (now linoleic acid-free) by fractional distillation. Thus, treatment of a tall oil-derived fatty acid mixture containing 41.4 weight % linoleic acid with CH₂:CHCO₂H and 0.15 weight % iodine 0.75 hr at 250° gave a mixture containing 42 weight % I and 0.6 weight % linoleic acid.

L2 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dicarboxylic acid from linoleic acid-containing fatty acid mixtures
 AN 1974:569214 CAPLUS
 DN 81:169214
 TI Dicarboxylic acid from linoleic acid-containing fatty acid mixtures
 IN Ward, Benjamin F.
 PA Westvaco Corp.
 SO Ger. Offen., 12 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2406401	A1	19740829	DE 1974-2406401	19740211
	DE 2406401	B2	19790920		
	DE 2406401	C3	19800529		
	CA 1016539	A1	19770830	US 1973-331957	A 19730212
				CA 1974-192034	19740207
				US 1973-331957	A 19730212
	GB 1421527	A	19760121	GB 1974-6223	19740211
				US 1973-331957	A 19730212
	JP 49134620	A2	19741225	JP 1974-17481	19740212
				US 1973-331957	A 19730212

GI For diagram(s), see printed CA Issue.
 AB The dicarboxylic acid I (R = R1 = H or CO₂H) was prepared by reaction of tall oil fatty acid mixts. containing conjugated and nonconjugated linoleic acid (II) with CH₂:CHCO₂H (III) in the presence of SO₂ or Pd/C for 1-3 hr at .apprx.220-50°. Thus, a distilled tall oil fatty acid mixture containing 32% nonconjugated and 10% conjugated II was heated with III in the presence of 0.5% Pd/C for 2 hr at 252° to give 30% I at II conversion 100%. This method allows the separation of fatty acids into an oleic acid-like and a dicarboxylic acid portion.

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
14.01	16.70

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-2.19	-2.19

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 11:23:01 ON 27 OCT 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 11:49:40 ON 27 OCT 2005
FILE 'CAPLUS' ENTERED AT 11:49:40 ON 27 OCT 2005
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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	14.01	16.70

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.19	-2.19

=> file reg

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	14.46	17.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.19	-2.19

FILE 'REGISTRY' ENTERED AT 11:49:58 ON 27 OCT 2005
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STRUCTURE FILE UPDATES: 26 OCT 2005 HIGHEST RN 866186-08-5
DICTIONARY FILE UPDATES: 26 OCT 2005 HIGHEST RN 866186-08-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> e 4-cyclohexylbutanoic acid/cn

E1	1	4-CYCLOHEXYLBIPHENYL/CN
E2	1	4-CYCLOHEXYLBROMOBENZENE/CN
E3	1 -->	4-CYCLOHEXYLBUTANOIC ACID/CN
E4	1	4-CYCLOHEXYLBUTANOIC ACID HYDRAZIDE/CN
E5	1	4-CYCLOHEXYLBUTANOIC ACID N'-(TERT-BUTOXYCARBONYL)HYDRAZIDE/ CN
E6	1	4-CYCLOHEXYLBUTANOL/CN
E7	1	4-CYCLOHEXYLBUTANOYL CHLORIDE/CN
E8	1	4-CYCLOHEXYLBUTYL 3-AMINOCROTONATE/CN
E9	1	4-CYCLOHEXYLBUTYL 4-PYRIDINECARBOXYLATE/CN
E10	1	4-CYCLOHEXYLBUTYL ISONICOTINATE/CN
E11	1	4-CYCLOHEXYLBUTYL METHANESULFONATE/CN
E12	1	4-CYCLOHEXYLBUTYL P-NITROBENZENESULFONATE/CN

=> \e3

L3 3423 \E3
(E3)

=> e3

L4 1 "4-CYCLOHEXYLBUTANOIC ACID"/CN

=> d 14

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 4441-63-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN Cyclohexanebutanoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Cyclohexanebutyric acid (6CI, 7CI, 8CI)

OTHER NAMES:

CN **4-Cyclohexylbutanoic acid**

CN 4-Cyclohexylbutyric acid

CN NSC 2158

CN NSC 406925

FS 3D CONCORD

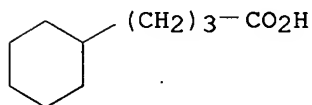
MF C10 H18 O2

CI COM

LC STN Files: ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS,
CASREACT, CHEMCATS, CHEMLIST, CSCHEM, GMELIN*, HODOC*, MEDLINE,
MSDS-OHS, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Other Sources: EINECS**, NDSL**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

174 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

174 REFERENCES IN FILE CAPLUS (1907 TO DATE)

8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
11.47	28.62

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-2.19

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 11:50:50 ON 27 OCT 2005

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FILE COVERS 1907 - 27 Oct 2005 VOL 143 ISS 18

FILE LAST UPDATED: 26 Oct 2005 (20051026/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> 14/prep

174 L4
3376692 PREP/RL
L5 10 L4/PREP
(L4 (L) PREP/RL)

=> d 15 5-10 ti

L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Metallacyclic carboxylates of nickel: synthons for the carbon-carbon bond formation via cross-coupling

L5 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of bicycloheptane-substituted diamide and its congener prostaglandin analogs as cardiovascular agents

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of bisthioamide-7-oxabicycloheptane prostaglandin analogs as antithrombotics

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation of N-(5,6-epoxy-7-oxabicycloheptane)diamide prostaglandin analogs as cardiovascular agents

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation and formulation of 7-oxabicyclo[2.2.1]heptane-substituted diamides and their congener prostaglandin analogs for treatment of

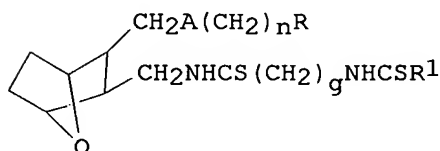
thrombotic disease

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Free radical addition of the diethyl ester of malonic acid to unsaturated hydrocarbons of the naphthenic series

=> d 15 7-10 ti fbib abs

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of bisthioamide-7-oxabicycloheptane prostaglandin analogs as antithrombotics
AN 1988:492639 CAPLUS
DN 109:92639
TI Preparation of bisthioamide-7-oxabicycloheptane prostaglandin analogs as antithrombotics
IN Nakane, Masami; Reid, Joyce
PA E. R. Squibb and Sons, Inc., USA
SO U.S., 21 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4738978	A	19880419	US 1986-928947 US 1986-928947	19861110 19861110
OS	CASREACT 109:92639; MARPAT 109:92639				
GI					



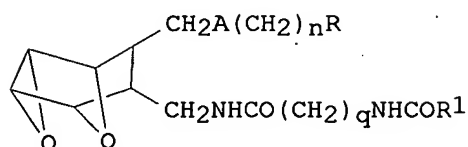
I

AB Title compds. I (A = CH:CH, CH₂CH₂; R = CO₂H, alkoxy carbonyl, tetrazolyl; R₁ = H, alkyl, alkenyl, alkynyl, aryl, arylalkyl, alkoxy, aryloxy, arylsulfonyloxy, etc.; n = 1-5; q = 1-12) their stereoisomers and salts, which are cardiovascular agents, useful, e.g., in the treatment of thrombotic disease (no data), are prepared tert-Bu [1S-[1 α ,2 β (5Z),3 β ,4 α]]-7-[3-[[[1-thioxo-2-[(1-thioxoheptyl)amino]ethyl]amino]methyl]-7-oxabicyclo[2.2.1]hept-2-yl]-5-heptenoate was prepared in 5 steps from Me [1S-[1 α ,2 β (5Z),3 β ,4 α]]-7-[3-(hydroxymethyl)-7-oxabicyclo[2.2.1]hept-2-yl]-5-heptenoate.

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of N-(5,6-epoxy-7-oxabicycloheptane)diamide prostaglandin analogs as cardiovascular agents
AN 1988:473226 CAPLUS
DN 109:73226
TI Preparation of N-(5,6-epoxy-7-oxabicycloheptane)diamide prostaglandin analogs as cardiovascular agents
IN Das, Jagabandhu
PA E. R. Squibb and Sons, Inc., USA
SO U.S., 20 pp.
CODEN: USXXAM

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4734426	A	19880329	US 1986-911178 US 1986-911178	19860924 19860924
OS	CASREACT 109:73226; MARPAT 109:73226				
GI					



AB Title compds. I (A = CH:CH, CH₂CH₂; n = 1-5; R = HO₂C, alkanoyloxy, alkali metal carboxylate salt, polyhydroxyamine carboxylate salt, tetrazol-2-yl; q = 1-12; R₁ = H, alkyl, alkenyl, alkynyl, aryl, arylalkyl, alkoxy, aryloxy, alkyl S(O)_n; n = 0-2; etc.) their esters, stereoisomers, and salts, cardiovascular agents useful in treatment of thrombotic disease (no data), were prepared Me [1 α , 2 β (5Z), 3 β , 4 α , 5 α , 6.a lpha.]-7[5,6-epoxy-3-(aminomethyl)-7-oxabicyclo[2.2.1]hept-2-yl]-5-heptenoate prepared in 13 steps from 7-oxabicyclo[2.2.1]-5-heptene-2,3-dimethanol was reacted at 0° with N-hexanoylglycine in THF and carbonyldiimidazole to give Me [1 α , 2 β (5Z), 3 β , 4 α , 5.a lpha., 6 α]-[5,6-epoxy-3-[[[(1-oxohexyl)amino]acetyl]amino]methyl]-7-oxabicyclo[2.2.1]hept-2-yl]-5-heptanoate.

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

TI Preparation and formulation of 7-oxabicyclo[2.2.1]heptane-substituted diamides and their congener prostaglandin analogs for treatment of thrombotic disease

AN 1987:196118 CAPLUS

DN 106:196118

TI Preparation and formulation of 7-oxabicyclo[2.2.1]heptane-substituted diamides and their congener prostaglandin analogs for treatment of thrombotic disease

IN Reid, Joyce Ann; Nakane, Masami

PA E. R. Squibb and Sons, Inc., USA

SO Eur. Pat. Appl., 139 pp.

CODEN: EPXXDW

DT Patent

LA English

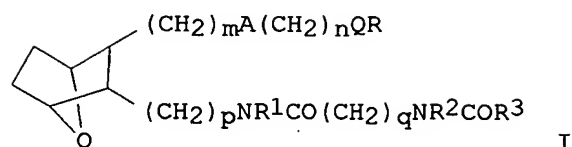
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 207684	A2	19870107	EP 1986-304675	19860617
	EP 207684	A3	19870429		
	EP 207684	B1	19941123		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
				US 1985-750948	A 19850701
				US 1986-853788	A 19860418
	US 4663336	A	19870505	US 1986-853788	19860418
				US 1985-750948	A2 19850701
	AU 8658715	A1	19870108	AU 1986-58715	19860613
	AU 603058	B2	19901108		
				US 1985-750948	A 19850701

ZA 8604485	A	19870225	US 1986-853788	A	19860418
			ZA 1986-4485		19860616
ES 556530	A1	19880216	US 1985-750948	A	19850701
			ES 1986-556530		19860624
			US 1985-750948	A	19850701
IL 79210	A1	19910310	US 1986-853788	A	19860418
			IL 1986-79210		19860624
			US 1985-750948	A	19850701
DK 8603106	A	19870102	US 1986-853788	A	19860418
DK 162528	B	19911111	DK 1986-3106		19860630
DK 162528	C	19920330			
			US 1985-750948	A	19850701
NO 8602635	A	19870102	US 1986-853788	A	19860418
NO 168038	B	19910930	NO 1986-2635		19860630
NO 168038	C	19920108			
			US 1985-750948	A	19850701
CN 86105664	A	19870218	US 1986-853788	A	19860418
CN 1009645	B	19900919	CN 1986-105664		19860630
			US 1985-750948	A	19850701
HU 45041	A2	19880530	US 1986-853788	A	19860418
HU 196779	B	19890130	HU 1986-2725		19860630
			US 1985-750948	A	19850701
FI 8602797	A	19870102	US 1986-853788	A	19860418
FI 93218	B	19941130	FI 1986-2797		19860701
FI 93218	C	19950310			
			US 1985-750948	A	19850701
JP 62063589	A2	19870320	US 1986-853788	A	19860418
JP 07103125	B4	19951108	JP 1986-155905		19860701
			US 1985-750948	A	19850701
DD 259192	A5	19880817	US 1986-853788	A	19860418
			DD 1986-292020		19860701
CA 1284643	A1	19910604	US 1985-750948	A	19850701
			CA 1986-512924		19860702
			US 1985-750948	A	19850701
ES 557754	A1	19871201	US 1986-853788	A	19860418
			ES 1987-557754		19870923
			US 1985-750948	A	19850701
ES 557748	A1	19880301	US 1986-853788	A	19860418
			ES 1987-557748		19870923
			US 1985-750948	A	19850701
ES 557750	A1	19880301	US 1986-853788	A	19860418
			ES 1987-557750		19870923
			US 1985-750948	A	19850701
ES 557746	A1	19880316	US 1986-853788	A	19860418
			ES 1987-557746		19870923
			US 1985-750948	A	19850701
ES 557747	A1	19880316	US 1986-853788	A	19860418
			ES 1987-557747		19870923
			US 1985-750948	A	19850701
ES 557751	A1	19880316	US 1986-853788	A	19860418
			ES 1987-557751		19870923
			US 1985-750948	A	19850701
ES 557752	A1	19880316	US 1986-853788	A	19860418
			ES 1987-557752		19870923
			US 1985-750948	A	19850701
			US 1986-853788	A	19860418

ES 557753	A1	19880316	ES 1987-557753	19870923
			US 1985-750948	A 19850701
			US 1986-853788	A 19860418
ES 557749	A1	19890401	ES 1987-557749	19870923
ES 557749	A5	19890503		
			US 1985-750948	A 19850701
			US 1986-853788	A 19860418

OS CASREACT 106:196118
GI



AB The title compds. [I; A = CH:CH, CH₂CH₂; Q = CH:CH, CH₂, CH(OH), halo-substituted CH₂, bond; R = alkoxy-carbonyl, CH₂OH, tetrazolyl, CONR₄R₅, CO₂H or an alkali metal or polyhydroxyamine salt; R₁ = H, alkyl; R₂ = H, alkyl; R₃ = H, alkyl, alkenyl, alkynyl, aryl, substituted sulfonyl, etc.; R₄, R₅ = H, alkyl, OH, alkoxy, aryl; m = 0-4; n = 1-5; p = 1-4; q = 1-12], cardiovascular agents useful, e.g., in treatment of thrombotic diseases (no data), were prepared by many methods. Me [1S-[1β,2α(5Z),3α,4β]]-7-[3-(tosyloxymethyl)-7-oxabicyclo[2.2.1]hept-2-yl]-5-heptenoate, prepared by tosylation of the hydroxymethyl derivative, was subjected to a Gabriel synthesis, followed by hydrolysis of the corresponding phthalimide to the aminomethyl derivative which was coupled with N-hexanoylglycine to give [1S-[1β,2α(5Z),3α,4β]]-I (A = CH:CH; Q = bond; R = MeO₂C; R₁ = R₂ = H; R₃ = pentyl; m = 1; n = 3; p = q = 1).

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Free radical addition of the diethyl ester of malonic acid to unsaturated hydrocarbons of the naphthenic series
 AN 1971:448381 CAPLUS
 DN 75:48381
 TI Free radical addition of the diethyl ester of malonic acid to unsaturated hydrocarbons of the naphthenic series
 AU Sadykh-Zade, S. I.; Dzhililov, R. A.
 CS Sumgait. Fil., INKhP, Sumgait, USSR
 SO Azerbaidzhanskii Khimicheskii Zhurnal (1970), (4), 77-80
 CODEN: AZKZAU; ISSN: 0005-2531
 DT Journal
 LA Russian
 AB Di-Et malonate (I) was heated 6 hr at 150-5°, a mixture of I, 1-vinyl-3-cyclohexene, and tert-Bu₂O₂ added, and the solution heated to yield di-Et (3-cyclohexen-1-ylethyl)malonate (II). Similarly prepared were 5 malonate esters. II was heated with alc. KOH, acidified with 10% H₂SO₄, and distilled to give γ-3-cyclohexen-1-ylbutyric acid.

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=> file reg

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DICTIONARY FILE UPDATES: 26 OCT 2005 HIGHEST RN 866186-08-5

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* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

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<http://www.cas.org/ONLINE/UG/regprops.html>

=> e 6-phenyl-3,5-hexadienoic acid/cn

E1	1	6-PHENYL-3,4-PYRIDINEDICARBOXYLIC ACID/CN
E2	1	6-PHENYL-3,5-HEXADIEN-2-ONE/CN
E3	1 -->	6-PHENYL-3,5-HEXADIENOIC ACID/CN
E4	1	6-PHENYL-3,5-HEXADIENOYLHYDROXAMIC ACID/CN
E5	1	6-PHENYL-3,5-HEXADIYN-2-OL/CN
E6	1	6-PHENYL-3,5-HEXADIYN-2-ONE/CN
E7	1	6-PHENYL-3,5-HEXADIYNYL ACRYLATE/CN
E8	1	6-PHENYL-3,5-HEXADIYNYL METHACRYLATE/CN
E9	1	6-PHENYL-3,9-DITHIA-6-AZAUNDECANE/CN
E10	1	6-PHENYL-3-((4,5,6,7-TETRAHYDRO-1H-INDOL-2-YL)METHYLENE)-1,3-DIHYDROINDOL-2-ONE/CN
E11	1	6-PHENYL-3-((4,5,7-TRIFLUOROBENZOTHAZOL-2-YL)METHYL)INDOLE-N-ACETIC ACID/CN
E12	1	6-PHENYL-3-(3-((7-PROPYL-3-(TRIFLUOROMETHYL)-1,2-BENZISOXAZOL-6-YL)OXY)PROPYL)DIHYDROPYRIMIDINE-2,4(1H,3H)-DIONE/CN

=> e3

L1 1 "6-PHENYL-3,5-HEXADIENOIC ACID"/CN

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
RN 91962-73-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN 3,5-Hexadienoic acid, 6-phenyl- (6CI, 7CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN **6-Phenyl-3,5-hexadienoic acid**
FS 3D CONCORD
MF C12 H12 O2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Ph-CH=CH-CH=CH-CH₂-CO₂H

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

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=> 11

L2 7 L1

=> d 12 1-7 ti

L2 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of arylalkanoylhydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders

L2 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of arylalkanoic acids and hydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders

L2 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of arylalkanoic acids and hydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders

L2 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of acetyloxymethyl esters and their therapeutic applications

L2 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Dienoic acids and phenols. A novel cyclization reaction

L2 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Studies on unsaturated carboxylic compounds. Tautomeric relationships in pentadiene systems activated by the carboxyl group

L2 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Heterocyclics. XV. The synthesis of thiophene polyenes

=> d 12 4-7 ti fbib abs

L2 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 TI Preparation of acetyloxymethyl esters and their therapeutic applications
 AN 2002:486175 CAPLUS
 DN 137:63074
 TI Preparation of acetyloxymethyl esters and their therapeutic applications
 IN Lan-Hargest, Hsuan-Yin; Weich, Norbert L.
 PA Beacon Laboratories, Inc., USA
 SO Eur. Pat. Appl., 30 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1216984	A1	20020626	EP 2001-310692	20011220
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2002161045	A1	20021031	US 2000-742727	A 20001221
	US 6720445	B2	20040413	US 2000-742727	20001221
	CA 2363755	AA	20020621	CA 2001-2363755	20011126
				US 2000-742727	A 20001221
	US 2002119996	A1	20020829	US 2002-55898	20020128
	US 6699902	B2	20040302		
				US 2000-742727	A3 20001221
OS	MARPAT 137:63074				
AB	Novel acetyloxymethyl esters, RCOOCH ₂ OCOMe [I; R = (un)substituted alkenyl, (un)substituted alkynyl, a cis or trans retinoyl, Z(X) o-(R1)p-(R2)q; Z = H, (un)substituted aryl, heteroaryl, cycloalkyl, alkoxy; n = 3, >3; X = S, O, CO, CH ₂ ; R1 = S, O, CH:CH, C.tplbond.C; R2 =				

CH₂, CH:CH, C.tplbond.C; o, p, q = same or different each between 0-10, but when o = 0 and R1 or R2 = CH:CH or C.tplbond.C, Z is not H or alkoxy], were prep'd for treating an illness, including cancer, hemol. disorders and inherited metabolic disorders, and treating or ameliorating other conditions. I are effective in the inhibition of histone deacetylase. Thus, cinnamoyloxymethyl acetate (II) was prepared by the reaction of cinnamic acid and chloromethyl acetate. II showed IC₅₀ = 12.5 μM against PC-3 prostate breast cancer cells.

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

TI Dienoic acids and phenols. A novel cyclization reaction

AN 1964:16233 CAPLUS

DN 60:16233

OREF 60:2808b-d

TI Dienoic acids and phenols. A novel cyclization reaction

AU Chiusoli, G. P.; Agnes, G.

CS Montecatini Co., Novara, Italy

SO Proc. Chem. Soc. (1963), (Oct), 310

DT Journal

LA Unavailable

AB Refluxing ω-alkylhexadienoic acids with solns. of NaOAc or KOAc in Ac₂O, preferably diluted with AcOH, provided a very efficient method of cyclization to aryl acetates. o-Cresol was obtained from hepta-2,5(or 3,5)dienoic acid (yield 65%); 1-hydroxybiphenyl (70%) from 6-phenylhexa-2,5(or 3,5)-dienoic acid; o-neopentylphenol (m. 37-8°, 83%) from 8,8-dimethylnona-2,5(or 3,5)-dienoic acid, and saligenin, mainly as polymer, from 7-acetoxyhepta-2,5(or 3,5)dienoic acid. The reactivities of the 2,5- and 3,5-tautomers were similar, isomerization of the 2,5- to the 3,5-dienoic form being catalyzed by bases. Cyclization was prevented if isomerization to the 2,4-form took place first, as in the case of hexadienoic and 5-methylhexadienoic acid. Acid cyclization required an electron shift towards the 6-position. Aspirin was obtained from hepta-3,5-diene-1,7-dioic acid by basic (61%) and by acidic (87%) cyclization.

L2 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

TI Studies on unsaturated carboxylic compounds. Tautomeric relationships in pentadiene systems activated by the carboxyl group

AN 1961:117984 CAPLUS

DN 55:117984

OREF 55:22107g-i,22108a-d

TI Studies on unsaturated carboxylic compounds. Tautomeric relationships in pentadiene systems activated by the carboxyl group

AU Chiusoli, Gianpaolo; Merzoni, Sergio

CS Donegani Research Inst., Novara, Italy

SO Chimica e l'Industria (Milan, Italy) (1961), 43, 255-9

CODEN: CINMAB; ISSN: 0009-4315

DT Journal

LA Unavailable

AB Me 2-cis-5-trans-hexadienoate (10 g.), b₂₈ 62-3°, n_D 1.4481, d₂₀ 0.9435, was mixed with 40 ml. 30% NH₃, the mixture left 24 hrs. at 20-5°, the precipitate (7.5 g.) filtered off, dried, and crystallized from C₆H₆ to give 3,5-hexadienamide (I), m. 101-2°, 223-4 μ (log ε 4.38). I (22 g.) stored 24 hrs. with 100 ml. 10% HCl in MeOH, treated with an equal volume of saturated CaCl₂, the organic layer dried (CaCl₂), and distilled gave Me 3,5-hexadienoate (II), b₃₀ 71-2°, n_D 1.4670, d₂₀ 0.9518, 222 μ (log ε 4.39), 0.7 g. of which treated with 0.53 g. maleic anhydride (III) gave an adduct, m. 97-9°, no absorption between 350 and 220 μ. Ozonization of 6 g. II in AcOMe at

-30° then hydrogenation over Pd-CaCO₃ at 3 atmospheric produced CH₂O and (CO₂H)₂. Hydrolysis of I with cold 10% HCl gave 3,5-hexadienoic acid (IV), which formed an adduct, m. 148-50°, with III. Reflux of II or IV with 20% NaOH led almost quant. to sorbic acid. Me 2,5-heptadienoate (V), b₁₅ 67-8°, n_{20D} 1.4560, d₂₀ 0.9358, left 8 hrs. at 20-5° with 50 ml. 30% NH₃ gave 8.5 g. 3,5-heptadienamide (VI), m. 138-9°, λ 229 mμ (log ε 4.40), transformed into Me 3,5-heptadienoate (VII), b₂₀ 83-4°, n_{20D} 1.4765, d₂₀ 0.9462, 228 mμ (log ε 4.35), with HCl in MeOH; adduct of VII with III m. 87-9°. Hydrolysis of VI with cold HCl, as well as that of V and VII by refluxing 1 hr. with 20% NaOH gave 3,5-heptadienoic acid (VIII), m. 55° (petr. ether), partial hydrogenation of which, then oxidation with KMnO₄ and esterification with MeOH gave AcOMe, EtCO₂Me, PrCO₂Me, but no BuCO₂Me. VII (10 g.) refluxed 10 hrs. with 30% NaOH yielded a mixture of VIII and 2,4-heptadienoic acid. CH₂:CMeCH₂CH:CHCO₂Me (IX), b₁₆ 62-3°, n_{20D} 1.4536, d₂₀ 0.9353, gave with concentrated NH₃ 10 days at 20° CH₂:CMeCH:CHCH₂CONH₂, m. 86-7° (C₆H₆), λ 228 mμ (log ε 4.35). IX refluxed with 5% Et₃N in MeOH yielded CH₂:CMeCH:CHCH₂CO₂Me (X), b₁₃ 65-70°, n_{20D} 1.4719, d₂₀ 0.9471, λ 227 mμ (log ε 4.26), containing Me₂C:CHCH:CHCO₂Me (XI). X added III to form a compound, m. 101-2° (C₆H₆); saponification of X with NaOH produced Me₂C:CHCH:CHCO₂H, m. 107-8°, λ 271 mμ (log ε 4.41), esterified to XI, b₁₀ 73-4°, n_{20D} 1.5145, d₂₀ 0.9566, λ 273 mμ (log ε 4.41). Me₂C:CHCH₂CH:CHCO₂Me (XII), b₁₅ 78-9°, n_{20D} 1.4630, d₂₀ 0.9320, was saponified with 10% NaOH and esterified with MeOH to Me₂C:CHCH:CHCH₂CO₂Me, b₁₂ 85-6°, n_{20D} 1.4838, d₂₀ 0.9457, λ 238 mμ (log ε 4.35). XII and NH₃ formed Me₂C:CHCH:CHCH₂CONH₂, m. 124-5°, λ 239 mμ (log ε 4.38). PhCH:CHCH₂CH:CHCO₂Me, b_{2.5} 133-5°, refluxed with NaOH in H₂O gave PhCH:CHCH:CHCH₂CO₂H (XIII), m. 108-9°, hydrogenated to 6-phenylcaproic acid; Me ester of XIII m. 46-8°, λ 285 mμ (log ε 4.42). Treatment of HO₂CCH₂CH:CHCH₂CH:CHCO₂H, m. 86°, with cold dilute NaOH gave (CH:CHCH₂CO₂H)₂, m. 191-2°, while HO₂CCH₂CH₂CH:CHCH:CHCO₂H, m. 221-4°, was formed after reflux with 20% NaOH.

L2 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

TI Heterocyclics. XV. The synthesis of thiophene polyenes

AN 1952:32682 CAPLUS

DN 46:32682

OREF 46:5577a-i,5578a

TI Heterocyclics. XV. The synthesis of thiophene polyenes

AU Miller, Robert E.; Nord, F. F.

CS Fordham Univ., New York, NY

SO Journal of Organic Chemistry (1951), 16, 1380-8

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA Unavailable

AB A series of ω,ω'-di-2-thienyl- and ω-phenyl-ω'-2-

thienyl polyene hydrocarbons is prepared Refluxing 50 g. CH₂(CO₂H)₂, 60 g.

PhCH₂CHO, and 10 drops NH₄Et₂ in 130 cc. absolute EtOH 6 h. gives 56%

PhCH:CHCH₂CO₂H (I), m. 85-6°. Treating 40 g. 2-

thiophenecarboxaldehyde (II), 30 cc. AcH, and 10 g. piperidine in 100 cc.

70% EtOH 8 days at 20° gives 36.5% 2-thiopheneacrolein (III), b₅

108-12°. Gradually adding 14 g. (CO₂Et)₂ in 10 cc. ether to an

ice-cold mixture of EtOK (from 7.5 g. K), 55 cc. ether, and 35 cc. EtOH and

then, after 15 min., 12 g. MeCH:CHCO₂Et in 10 cc. ether with shaking, and

keeping the mixture 24 h. in an ice box gives 14 g. EtO₂CCOCHKCH:CHCO₂Et

which, dried and refluxed 1 h. with 40 cc. Ac₂O, gives 8.9 g. di-Et

α-acetoxymuconate, EtO₂CC(OAc):CHCH:CHCO₂Et (IV), b₂ 150-3°.

Reduction of IV with 20 g. Al-Hg in 300 cc. moist ether 3 h. and

saponification of the

crude di-Et α -acetoxy- β -hydromuconate with KOH-MeOH gives 76% trans,trans-hydromuconic acid (V), m. 194-5°. Et 2-acetoxyhexatrienoate (10 g.) (obtained from Et sorbate), m. 46-6.5°, treated as above with (CO₂Et)₂, reduced with Al-Hg, and purified chromatog. gives 6.6 g. di-Et 1-acetoxy-2,4-hexadiene-1,6-dicarboxylate (VI), b₁ 158-60°. Saponification and reduction of VI gives 2,4-hexadiene-1,6-dicarboxylic acid (VII), m. 190-1°. Refluxing 20 g. PhCH:CHCHO (VIII), 24 g. (CH₂CO₂Na)₂ (IX), and 25 g. Ac₂O 6 h. at 125-30° gives 7.1% β -cinnamylidenepropionic acid (X), m. 113-14°. With (CH₂CO)₂O in lieu of IX, the yield is only 1% X. Heating VIII, (CH₂CO)₂O, and Ac₂O with 12 g. NEt₃ 6 h. at 180° gives 17% X. Adding a few cc. of 20 g. VIII and 30 g. CH₂BrCH₂CO₂Me in 100 cc. C₆H₆-tetrahydrofuran (1:1) to 20 g. Mg and 0.5 g. HgCl₂, heating the mixture on a steam bath to initiate the reaction, then adding the remainder of the solution over a period of 45 min. with gentle refluxing, refluxing the mixture 45 min., and working it up in the usual way give 33% X, m. 112.5-13°. Adding 10 g. PbO to 14 g. PhCH₂CO₂H (XI) and 11 g. II in 30 cc. hot Ac₂O with shaking, refluxing the mixture 5 h., pouring the hot mixture into a beaker, keeping it overnight, and filtering it give 25% 1-phenyl-2-(2-thienyl)ethylene (XII), crystals from C₆H₆-EtOH, m. 110-11°. Adding dropwise 21 g. PhCH₂Br in 50 cc. ether to activated Mg and 10 cc. ether, heating the mixture 15 min. on a steam bath, then adding dropwise 12 g. II, hydrolyzing the cooled mixture with dilute HCl, and extracting with ether give 45.3% XII, m. 111-11.5°. Treating 13.8 g. III and 14 g. XI with PbO in 30 g. Ac₂O gives 29% 1-phenyl-4-(2-thienyl)-1,3-butadiene (XIII), m. 141.5-2°, which is also obtained in 26.4% yield when 11 g. II, 16.2 g. I, 12 g. PbO, and 35 g. Ac₂O are refluxed. Cautiously heating 2.5 g. XIII and 4 g. maleic anhydride over the free flame 15 min. gives almost 100% of a phenyl(2-thienyl)- Δ 4-tetrahydrophthalic anhydride, m. 186.5-7.5°. III (13.8 g.), 16.2 g. I, and 15 g. PbO in 38 g. Ac₂O give 30% 1-phenyl-6-(2-thienyl)-1,3,5-hexatriene (XIV), yellow crystals, m. 174-5°. Refluxing 1.8 g. X, 1.1 g. II, and 2.3 g. PbO in 3.1 cc. Ac₂O gives 30% XIV. III (1.4 g.), 1.8 g. X, and 2.3 g. PbO in 3.3 cc. Ac₂O give 18.9% 1-phenyl-8-(2-thienyl)-1,3,5,7-octatetraene, orange crystals, m. 206-7°. Refluxing 11 g. II and 14 g. 2-thiopheneacetic acid (XV) with 15 g. PbO in 30 g. Ac₂O gives 27% 1,2-di-2-thienylethylene, tan crystals, m. 130.5-1°. Boiling 11.8 g. (CH₂CO₂H)₂, 22 g. II, and 33 g. PbO 5 h. in 30 g. Ac₂O gives 20.6% 1,4-di-2-thienyl-1,3-butadiene, m. 164.5-5°, which is also obtained in 22.4% yield when 14.2 g. XV and 13.8 g. III are refluxed 5 h. in 30 g. Ac₂O with 15 g. PbO. Refluxing 7.3 g. II, 4 g. V, and 4.4 g. PbO in 9.2 g. Ac₂O gives 12.8% 1,6-di-2-thienyl-1,3,5-hexatriene, yellow crystals, m. 198-9°. Refluxing 4 g. VII, 6.2 g. II, 4 g. PbO, and 9 g. Ac₂O 5 h. gives 15.9% 1,8-di-2-thienyl-1,3,5,7-octatetraene, m. 229-30°, also obtained in 23.6% yield when 11.8 g. (CH₂CO₂H)₂, 13.8 g. III, 15 g. PbO, and 30 g. Ac₂O are refluxed 5 h. Refluxing 8 g. III, 4.1 g. V, 4.5 g. PbO, and 9 g. Ac₂O 5 h. gives 15% 1,10-di-2-thienyl-1,3,5,7,9-decapentaene, crystals from CHCl₃, m. 256-7°. In the same way, 6 g. VII, 11 g. III, 6 g. PbO, and 30 cc. Ac₂O give 7.1% 1,12-di-2-thienyl-1,3,5,7,9,11-dodecahexaene, reddish crystals, m. 270-2°. Adding 20 g. II to 12.5 g. MeCH:CHCHO in 100 cc. 70% EtOH with strong cooling, then 10 g. C₅H₅N-AcOH (1:1) in a N atmospheric, keeping the mixture 8 days at 20°, filtering the precipitate, extracting it with EtOH-H₂O, extracting the filtrate with ether, and evaporating the dried ether solution give 36% 5-(2-thienyl)-2,4-pentadienal, pale yellow oil, b₂ 134-6°, m. 44-5°, which is also obtained in 12% yield as a byproduct in the reaction of II with AcH. Recrystn. of the EtOH-H₂O extract residue gives 15.6% 9-(2-thienyl)-2,4,6,8-nonatetraenal, orange crystals, m. 153-4°.

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COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

14.19

22.13

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TOTAL

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